

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number
WO 2004/094739 A3

(51) International Patent Classification⁷: **E04B 1/00**

(21) International Application Number:
PCT/US2004/012046

(22) International Filing Date: 19 April 2004 (19.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/463,435 17 April 2003 (17.04.2003) US

(71) Applicants and

(72) Inventors: MCDONALD, Frank [US/US]; 20 Valley View Drive, Orinda, California 94563 (US). MCDONALD, Susanna, Novy [US/US]; 20 Valley View Drive, Orinda, California 94563 (US).

(74) Agent: AITKEN, Andrew, C.; VENABLE LLP, P.O. Box 22-0261, Washington, District of Columbia 20043-9998 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

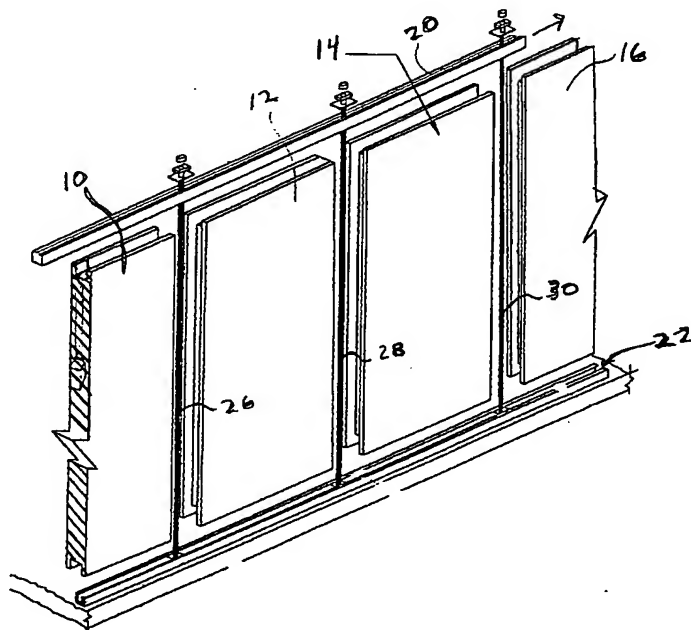
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
24 March 2005

[Continued on next page]

(54) Title: MODULAR BUILDING PANELS, METHOD OF ASSEMBLY OF BUILDING PANELS AND METHOD OF MAKING BUILDING PANELS



(57) Abstract: A modular construction system is made of a plurality of panels (10,12,14,16) having peripheral frame elements defining a top channel, a bottom channel, and side channels. An exterior planar sheet (40) and an interior planar sheet element (42) enclose an inner core region (44) that is filled with an adhesive bonding material that attaches the components together.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/12046

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E04B 1/00
US CL : 52/284, 281

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 52/284, 281, 309.3, 23

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,136,822 (BLUM) 11 August 1992 (11/08/92), abstract, column 1, lines 12-15, column 3, lines 25-35, 45-46.	1-12, 14-16, 18, 19, 21-26
Y		13, 17, 20, 13
Y	US 4,028,855 A (PREWER) 14 June 1977 (14/06/77), figures 1-8.	
Y	US 3,330,084 A (RUSSELL) 11 July 1967 (11/07/67), figure 5.	17
A	US 4,035,972 A (TIMMONS) 19 July 1977 (19/07/77).	
A	US 6,256,960 B1 (BABCOCK et al.) 10 July 2001 (10/07/01).	
A	US 5,505,031 A (HEYDON) 09 April 1996 (09/04/96).	
A	US 5,353,560 A (HEYDON) 11 October 1994 (11/10/94).	

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search

29 December 2004 (29.12.2004)

Date of mailing of the international search report

24 JAN 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Brian Glessner

Telephone No. 703-305-0031